Proceedings of the Iowa Academy of Science

Volume 40 | Annual Issue Article 6

1933

# Some Biological Contributions to Recreation (Address of the President)

H. E. Jaques
*Iowa Wesleyan College*

# SOME BIOLOGICAL CONTRIBUTIONS TO RECREATION

H. E. JAQUES

Address of the president:

To my memory comes the scene of a little group of college students nearing the end of a long morning tramp through the tall dew wet grass of early spring. We were out on a bird trip and had gone several miles through the woods. The physical condition of the little company would not be expected to inspire enthusiasm. As we reached the city park and found still more warblers breakfast gathering in the trees, one of the young women cried out with an exultation never to be forgotten, "Oh! I know I shall enjoy this all my life."

Years later in a distant city we stopped at the home of this young woman. She soon turned the conversation to her interest and that of her children in the birds. It was shortly apparent that that early morning prophecy had been a true one.

The relation of Biology to our working world is at once apparent. It relates itself vitally to every side of our physical well being. Much of our commercial life deals with products that have their sources in plants and animals. Its influences are primitive and primary, yet cosmopolitan. The Hottentot of necessity has discovered many biological principles yet the best informed realize that by far the major part of the field is still untouched. Our working world deals continually with biological functions and products and an immense amount of literature is devoted to these economic phases of living things.

Recreation is a necessary part of man's existence. The contributions of biology to recreation are many and far reaching. It is some of these of which I wish to speak.

These recreational interests take many forms and range all the way from a most casual appreciation of beautiful landscapes as one walks or rides about to the activities of the ardent enthusiast who may spend a great deal, both of time and money, in an avocational devotion to some nature hobby or investigation. In the early days of our country hunting and fishing were a necessity, now they are recreation. In like manner such activities as garden-

ing, bee keeping, horticulture, and floriculture, persued by many in a professional way, for countless others have high interest avocationally. Thus, what is remunerative work for one man becomes recreation to another.

The plant kingdom with its more than 250,000 known species and the animal kingdom with a good 840,000 species bring together more than a million living things each with characters and peculiar habits sufficient to engage the lively interest of a thoughtful observer. Many amateurs find wholesome relief from tired nerves in rediscovering for themselves life history secrets well known to the scientists.

The life history and habits of a very large percentage of these creatures of the biological field have never been carefully investigated, so that this amateur investigation brings many wholly new facts to light. Biological science is deeply indebted for much valuable information that has been discovered in this avocational way.

Any group of plants or animals offers good possibilities for wayside interests. Probably the birds rank most popular if numbers of devotees are considered. They are so human in their ways and are of such universal interest with young and old that in many quarters one admits neglected culture not to know the birds.

Once the collecting of bird skins or mounted birds was quite the popular thing. The collecting of bird eggs persisted longer. Now the fine popular interest in birds has frowned down these practices as too destructive of bird life until except for museums and definite scientific projects, few such collections are made. The camera and the trap have replaced the gun, and birds are studied by banding and photography. To make an acceptable motion picture film or single photographs of birds living their normal lives is a challenge to the skill and patience of the best. Likewise to maintain a trapping station where birds are caught, and banded involves skill and perseverance, but yields some amazingly interesting records. Both of these fields of study have many amateur followers and our knowledge of birds is being enriched through their contributions. Many others find pleasure in feeding the birds and observing them or in getting out of doors to live with the birds for a time.

Flowering plants raised indoors and out bring cheer to many homes. Their culture consumes a large portion of the recreational time of their owners. Through their larger plantings in parks, the public is brought to spend more time out of doors in healthful carefree surroundings.

Some prefer to specialize and in consequence, one sees collections

of Gladiolas, Dahlias, Sweet Peas, Chrysanthemums, etc., or the amateur florist may find delight in hybridizing some group of plants to develop new varieties. Our wild flowering plants are being brought in and domesticated. Some of the rarer wild plants are thus being guarded against extinction.

Fish are selected by some homes to give a touch of living interest. They call for balanced aquaria with water plants, snails, newts tortoises, etc. The little aquatic world soon has its complications of algae, water molds, and other living forms so that the biological problems involved may become rather extensive.

Microscopic life has an especial appeal for many persons. Of course there is no lack of material for such interests. The chances to find new species of elephants are not good but when one starts in to examine the world through the microscope, drop by drop, the possibilities for new discoveries and an altogether interesting time are unlimited.

The Mollusks — and there are 80,000 species — have their interested friends. For one with the collector's instinct they have the advantage of being easily kept if only the shells are taken. Then there is the fun of collecting and exchanging shells, each with its history and reminiscence of travel.

Reptiles would receive scant favor in many quarters yet they, too, have their admirers as testified to by some reptile clubs where pet snakes and lizards are displayed and their relative merits discussed.

Maybe the opinion is colored with prejudice but to my mind the insects offer unusual advantages for recreational interests. As to species, they outnumber all other animals. In fact, the number of known species of insects considerably exceeds the combined number of all other animals and all the plants put together.

As individuals they represent the most successful type of animal life. They are exceedingly abundant and ever present both as to place and time. Game becomes scarce, fish will not always bite, but the student of insects can always find them and find them doing something of interest. A very wise man many centuries ago pointed out the value to be had from studying ants. It's not just the sluggard who should go to an anthill for inspiration. Our present social and economic breakdown might get some valuable ideas from the ants which apparently know better than man how to live a successful community life. Every one of the more than 625,000 species have some highly interesting ways.

If one enjoys making collections nothing can beat the insects.

Readily found, easily mounted and kept, beautiful, interesting, abundant, colorful; they are ideal for collection purposes. They are not artificial as stamps or other man made devices and so are not commercialized. Their classification is sufficiently difficult to be worthy of the most exacting student, yet the beginner can make ready progress with them. Then, one need not fear that he is depleting natures supply in collecting insects as is the case with rare plants or birds. They make a ready appeal to the interest wherever seen, and rate high for recreation.

Many authorities on various insect groups have been amateurs who worked at their insect interests only at hours they could spare from their business. I have a friend who is a musician by profession. For several years he has found rest in collecting insects, and has amassed a most interesting lot of specimens as well as a surprising lot of information. He does it solely for recreation yet I fear his amateur interest puts to shame my professional enthusiasm in the field.

There is no just ground for questioning the scientific value of such nature collecting and classification work. The making of a new distributional record of plants or animals is fully on a par with the making of new chemical compounds or new applications of physical forces and doubtless of much greater value to society than the making of great collections of dollars.

I have spoken of some of the possibilities of living things to contribute to man's enjoyment during his leisure hours. To what extent are these possibilities utilized? Let us review some of the agencies enlarging the possibilities of man's enjoyment from nature.

If he is to get intelligent pleasure from them he needs some help with his observations. I recall some of the pitiful attempts my associates and I in our youthful days made in our efforts to live with nature and to read her secrets. We spent a great deal of time hunting out birds but could not name them many times when they were found. The books of colored bird pictures now so common, were unknown then and the help we could get from our elders was often not very much nor very good. Then I think of some of our efforts to collect insects. We didn't know how to kill them or how to mount them. A half hours help from someone who knew how, would have multiplied our enthusiasm and possibilities for learning and pleasure. We visited the woods and reveled in the wealth of ferns and flowers but had no one to tell us much about it. Now many nature books beautifully illustrated are available for young and old and the schools, magazines, daily press, radio, and movies, are all con-

tributing a popular interest in these living things. From kindergarten all through the grades in our public schools, nature study is emphasized. Nature clubs and contests intensify the interest as testified by the frequent visits of some of the grade children to ask us about birds, insects, or flowers being studied at school.

In high school, the regular courses in biology and agriculture deal largely with the popular phases of living things, general science, and geography also frequently treat of animals or plants. Science clubs organized as independent units or affiliated with the Junior Academy of Science movement contribute to the interest and knowledge.

In the college and university, biological work is greatly increased over that of high school. Much of it, of course, is specialized and is designed for those who are preparing for some professional career in which biology figures. We who teach should not lose sight, however, of the fact that for each student who will use his biology in a major professional way, many others will find their work in rather wholly disrelated fields. Their biology courses if made a living thing is far from being wasted on them, however. It should give them a better appreciation of life and a new outlook. It may give them some fine recreational interests for all their lives. It would seem that at least some of the high school and college courses in biology should be planned to give this larger group of students an interest in living things that will be a source of pleasure to them as long as they live. We have biological courses designed for many other practical purposes. It would seem that a recreational biology would be timely.

Adults make contact with nature instruction in night schools and summer camps. The American school of Wild Life Protection of McGregor, Iowa, while different from any other organization, is still illustrative of this adult instruction. There, under ideal surroundings, old and young mingle and are directed by nationally known leaders through lectures and field trips to a better appreciation of nature. The work is serious, yet recreational and inspiring and reflects itself through schools and clubs in many communities.

Three outstanding movements among boys and girls center much of their activities around Nature's living things. I am referring to the Boy Scouts of America, the Camp Fire Girls, and the Girl Scouts.

The grand total membership of the Boy Scouts of America is over 900,000. Much of their program is built around out-door life

and an intelligent contact with plants and animals figures large in their activities. "An important part of the outdoor program of scouting is the conservation of wild life. In some communities Scouts serve as official aids to game wardens. In others they have established and maintained sanctuaries for birds and wild life. Bird-house building is a familiar project in almost every local council. In connection with winter camps, shelters, and feeding stations for birds are maintained." Summer camps are active in promoting wild-life conservation.

Studies of nature have prominent place in the Scout camps maintained throughout the country. Five hundred fifty-four such camps were held in 1931. Over 125,000 different boys attended these camps for an average of 12 days each. In these camps and throughout the year the boys are getting nature facts that offer large recreational possibilities for future years.

A study of the merit badge program serves as an indicator of part of the biological relationships of scouting. The requirements for the earning of many of these merit badges are very exacting and involve a great deal of work by the youthful Scout.

Let us look at the numbers of merit badges issued for the year 1931 in some biological related subjects. They total well over 75,000. Some of the subjects were as follows:

| | | | |
|---|---|---|---|
| Agriculture | 1,566 | Forestry | 13,844 |
| Animal Industry | 6,818 | Gardening | 5,178 |
| Bee-keeping | 679 | Insect Life | 238 |
| Bird Study | 12,726 | Reptile Study | 5,395 |
| Botany | 1,083 | Zoology | 959 |
| First aid to Animals | 24,786 | | |

For the Girl Scouts, Bertha Chapman Cady, Girl Scout Naturalist at the national headquarters reports a total membership of 231,708 and says, "Nature study is a very definite part of the program for every one of these girls — from the Tenderfoot stage through the whole program. Therefore the number of badges sold during 1932 does not give a real indication of the amount of nature work actually done by our Girl Scouts."

What about the knowledge that is required to earn one of these badges? Take the "Insect Finder" badge for instance; it sounds like a little thing but when we consider the requirements, it is not so simple. Some of the demands are:

1. Be able to readily recognize 50 insects.
2. Carefully study 25 of these, selecting ones that represent at least ten different orders.

3. Rear life history stages of two insects.
4. Record at least two weeks observation of a colony of living insects in captivity.
5. Collect and rear adults of at least three insect galls.
6. Find relation of insects to man with regard to his health and his crops.
7. Be generally familiar with at least three near relatives of insects other than spiders.
8. Study carefully five spiders of different groups.

Other badges of a biological phase are: Bird Finder, Gardener, Observer, Flower Finder, Land animal Finder, Fresh water life Finder, Salt water life Finder, Tree Finder, and Wild Flower Finder. The total number of such badges earned by Girl Scouts in 1931 was 24,611.

The Camp Fire Girls do a similar work and carry a biological program to their girls in somewhat the same proportions. Their awards are Honor Beads of different colors for the several crafts. The Nature Craft honors are blue and include 21 requirements in bird lore, 13 in gardening, 23 in plants, trees and flowers; 6 in seashore life; 10 in wild animals; and 6 in insects. Together they offer a comprehensive training in biological things.

A contribution to recreation of unusual value and importance is offered through the state parks of our nation. As early as 1641 Massachusetts made the "Great Ponds," bodies of fresh water of over ten acres, "forever open to the public for fishing and fowling," but it was not until after the Civil War that our people became interested in preserving the beauty spots of our country. The first state park was established in 1865. It was Yosemite and later became a national park. New York started its state park program with Niagra Falls. It took eighteen years to build sufficient sentiment to get the state to undertake that important piece of conservation. State parks are ideal in that they stress a program of simple wholesome recreation with the minimum of commercialism.

The movement has been accelerated in more recent years until now almost every state has its parks or other recreational areas under state control. These parks number about 400 and have a combined area of over 5,000,000 acres. Michigan ranks first in number of state parks with around 70, altho New York, ranking second with some 60 parks has the largest total area that any state gives to state parks and has also the two largest single state parks. Custer State Park, the only state park in South Dakota, is the third largest single park and puts its state second for state park areas.

We are proud that our own state ranks third in number of state parks, though in total area several other states outstrip us.

State Forests, Game Preserves, and State Monuments add their contribution to recreation. There are over two hundred state forests with some 3,000,000 acres representing the total area. One hundred game preserves have an area of 500,000 acres and about 140 state monuments complete the list of the state-owned recreation units.

A few states have provisions for county parks and a number of areas are devoted to this purpose.

City parks with their floral plantings, zoos, and other biological displays, bring to millions, a health giving interest in out-door life.

Taking our own Iowa program as typical of state parks we find that our 42 parks have a total area of a little more than 8,000 acres. Contributions from interested individuals and societies have helped in getting many of these tracts although the state has expended more than $400,000 towards their original cost.

One needs only to visit some of these parks and note the fine interest being taken in these conservation and recreational centers by the many visitors, to realize that the purchase and maintenance of our Iowa parks is an exceptionally good investment. The board of conservation has shown unusual foresight in choosing the park areas, selecting the custodians, and in the general policy of administration. During our biological survey trip "round the rim of Iowa" taken during June and July, 1932, twenty Iowa parks were visited. We saw these parks at their best and at their worst. We mingled with the crowds of visitors and sometimes conducted nature trips. We met the custodians on familiar terms and became well acquainted with them. All the members of our little party came back unanimous in their praise of the beauty and recreational utility of these parks, and of the unusually fine spirited custodians. Many of the visitors showed a genuine interest in the plant and animal life and practically all of them a fine respect for the parks and park property.

The estimated total attendance of thirty-seven Iowa parks in 1932 was 2,061,083. This number equals about 80% of the population of the state.

The National Parks report a total attendance of 2,948,507 for the same year. These attendance figures for the Iowa and the National parks show a falling off in each case of about five per cent from that of the preceding year, perhaps chargeable to the depres-

sion. Figures over a period of years indicate an increasing interest in the parks.

One state park, the Ledges, near Boone, has caged wild animals on exhibition but a number of the Iowa parks maintain nature trails and nature lectures have figured to instruct the visitors. A more comprehensive program of nature education is being worked out for the parks for this coming summer.

Our Iowa state parks have been selected with conservation and recreation in mind and have been kept from commercialism. The visitors are finding that wholly enjoyable times are possible without the claptrap and confusion of the commercial amusement park.

A visit to our Iowa parks amazes one as to the beauty and diversity of scenic interest. Jasper pool amid the outcropping Sioux quartzite of Gitchie Manito in extreme northwest Iowa; the great palisaded bluffs of Palisades-Kepler Park near Mt. Vernon; the blue-water lakes of eleven of the parks; the sand dunes and oxbow lake of Lewis and Clark; the never-to-be-forgotten hillside prairie at Oak Grove; the natural bridge at Maquoketa caves; two "devil's back bones," one at Pammel Park, the other in Delaware County; Waubonsie's great wind-blown sandy bluffs; Pilot Knob with its steep glacial hills, Dead Man's Lake, and floating bog; the great cool springs of Backbone Park; the cave at Bixby with its summer ice; and in many others — graceful winding rivers, great trees of many species, high bluffs, interesting rock formations, caves, deep shady fern-filled ravines, and hill-sides ablaze with native flowers, all portray a wealth of natural beauty few realize our state possesses.

Our country now owns over one hundred national parks and national monuments. These have a total area of more than 20,000 square miles. They are scattered throughout our nation where natural phenomena or historic interest abounds. That they make a large contribution to the recreation of our people is attested by the annual roll of visitors, well over 3,000,000 in 1931.

The establishment and administration of these parks and monuments serves a dual purpose — the conservation of their natural resources and the offering of recreation through intelligent interest. Increasingly effective efforts are being made to realize the most in these aims. The success of the educational programs of our national parks is apparent.

Biological interests likely take first place in most of these parks. In many of them Nature runs riot in a prodigal display of plant and animal life. Nature trails with items of special interest plainly marked in simple terms, museums in which are displayed the plants

and animals abounding in the region, special displays of fresh seasonal wild flowers, opportunities to view the wild animal with safety at close range, special lectures who conduct trips and give evening programs, make learning easy. The national park administration is to be commended for their successful efforts to further popularize an intelligent interest in out-door things.

These educational programs have been provided for practically all of the parks. "Auto trips guided by naturalists, often called auto caravans, continue to hold the spot-light as a new development with a great appeal to the public. One caravan starting at Old Faithful in Yellowstone, contained more than 300 cars and more than 800 persons. During the year field trips to the number of 4,613 were offered with a total attendance of 218,830. Six thousand six hundred and four lectures attracted 1,105,354 persons. Museum attendance brings the grand total of contacts of the educational service of our national parks during 1931 to 2,313,821.

Several universities use the national parks for summer field classes in which biological interests have major concern.

A junior nature school for children is conducted at Yosemite. "The results attained indicate that nothing is more interesting to children than the study of living things." Boy Scouts and Girl Scouts visit the parks by troops and profit from the educational work.

"A prime feature continues to be the display of wild life. Wild bears to be seen at the bear feeding platforms, draw thousands of people. Tame elk, antelope, deer, and mountain sheep, keep the amateur photographer busy. Wherever a close view of animals is possible there the visitors foregather."

Displays of cut wild flowers have been successful but are being replaced by the even more popular exhibits of wild flowers growing normally in botanic gardens. At Carlsbad Caverns National Park the naturalists give lectures on bats during their flight. Bat cave, one of the caverns, is estimated to harbor 3,000,000 of these flying mammals. Fishing features prominently in many of the parks and the U. S. Bureau of Fisheries cooperates in restocking the streams.

Time forbids that we should review the recreational contributions from local, state, and national clubs, and societies concerned with living things; of museums, aquariums, and botanical and zoological gardens. With less organization but just as effective in their contributions are hunting, fishing, gardening, hiking, etc. All

of these biological interest-giving activities figure in a large way for man's entertainment and pleasure.

In much this same manner, claims to valuable recreational contributions could be made by each of the sciences. We who are gathered here today are immensely interested in the professional side of our respective fields, and will strive for every possible advancement in our science. Let me urge upon you, particularly in these times, the promotion of a wider reaching popular interest in our sciences. Such increased interest will enhance both the recreational and applied values of our science and constitute a valuable service to our state and nation.

IOWA WESLEYAN COLLEGE,
MOUNT PLEASANT, IOWA.